

2011 21st International Conference on Noise and Fluctuations

(ICNF 2011)

**Toronto, Ontario, Canada
12-16 June 2011**



IEEE Catalog Number: CFP1192N-PRT
ISBN: 978-1-4577-0189-4

Monday, June 13

PT1: Plenary Talk 1

Noise and diffusion of hot carriers in semiconductor materials and devices

Jean-Pierre Nougier (Université Montpellier 2, France); Luca Varani
(University Montpellier & Institut D'Electronique du Sud, France)
pp. 1-8

PT2: Plenary Talk 2

Noise and Fluctuations in Human Physiology: Anomalous Statistics in Health and Diseases

Yamamoto Yoshiharu (The University of Tokyo, Japan)
pg. 9

T10: Modeling & Simulation

Modeling and Simulation of Noise in Transistors under Large-signal Condition

Fabrizio Bonani (Politecnico di Torino, Italy); Simona Donati Guerrieri
(Politecnico di Torino, Italy); Ghione Giovanni (Politecnico di Torino, Italy);
Riccardo Tisseur (Politecnico di Torino, Italy)
pp. 10-15

Noise and Terahertz Rectification in Semiconductor Diodes and Transistors

Javier Mateos (University of Salamanca, Spain); Ignacio Iñiguez-de-la-Torre
(University of Salamanca, Spain); Tomás González (University of Salamanca,
Spain)
pp. 16-21

T6: Circuit & Systems

A Rigorous Analysis of Oscillator Noise Including Orbital Fluctuations

Fabio Traversa (Universitat Autònoma de Barcelona, Spain); Fabrizio Bonani
(Politecnico di Torino, Italy)
pp. 22-27

T8: Biophysical System

Noise-based Information Processing

Laszlo Kish (Texas A&M University, USA); Sunil Khatri (Texas A&M University, USA); Sergey Bezrukov (National Institute of Health, USA); Ferdinand Peper (National Institute of Information and Communications Technology, Japan); Zoltan Gingl (University of Szeged, Hungary); Tamas Horvath (Fraunhofer Institute, Germany)

pp. 28-33

T9: Financial System

Critical Fluctuations Observed in Collective Human Behaviors

Misako Takayasu (Tokyo Institute of Technology, Japan)

pp. 34-36

P1: Posters for T1 & T2

Structure Acoustic Design of Hull Structures with Integrated Wave Impending Technique

Ji Fang (Harbin Engineering University & Shipbuilding Engineering Department, P.R. China)

pp. 37-40

Unidirectional rotation driven by random fluctuations

Cheng-Hung Chang (National Chiao Tung university, Taiwan); Tian-Yow Tsong (Academia Sinica, Taiwan)

pp. 41-44

Harmonic oscillator with non-Gaussian frequency fluctuations

Alexander Dubkov (Lobachevsky State University, Russia)

pp. 45-48

Time dependent statistical thermodynamic properties of disordered solids

Moyuru Ochiai (Waseda University, Japan); Takashi Sawaguchi (Toyo University, Japan)

pp. 49-52

Current noise in stationary conditions in MgB₂ thin films

Claudio Gandini (Universita' del Piemonte Orientale "A. Avogadro", Italy); Aldo Masoero (Università del Piemonte Orientale, Italy); Valentina Andreoli (INRIM Torino, Italy); Eugenio Monticone (Istituto Nazionale di Ricerca Metrologica (INRIM), Italy)

pp. 53-56

***Analysis of Low-Frequency Noise in Organic Field-Effect Transistors
Combining Static and Noise Data***

Yong Xu (Imep/Inpg Minatec, France); Francis Balestra (IMEP-LAHC, France); Jan A. Chroboczek (ENSER-Grenoble & MINATEC, France); Gerard Ghibaudo (IMEP-LAHC & Minatec-INPG, France); Takeo Minari (2MANA, NIMS, Tsukuba, Japan); Kazuito Tsukagoshi (2MANA, NIMS, Tsukuba, Japan); Romain Gwoziecki (CEA-LITEN, France); Romain Coppard (CEA-LITEN, France)

pp. 57-60

Atomic Vibration-Induced 1/f Noise in Sensing Nanomaterials

Mihai Mihaila (Honeywell, Romania)

pp. 61-64

1/f Permittivity Fluctuation in Fullerene C60

Hideo Akabane (Ibaraki University, Japan)

pp. 65-68

Low Frequency Noise and Ions Diffusion in the CdTe Bulk Single Crystals

Hassan Elhadidy (Brno University of Technology, Czech Republic); Josef Šikula (Brno University of Technology, Czech Republic); Ondrej Sik (Brno University of Technology, Czech Republic); Jiri Zajacek (Brno University of Technology, Czech Republic); Jan Franc (Charles University, Czech Republic); Pavel Moravec (Charles University, Czech Republic)

pp. 69-72

Low-frequency noise in ZnO varistor structures

Lech Hasse (Gdansk University of Technology & Faculty of Electronics, Telecommunications and Informatics, Poland); Janusz Smulko (Gdansk University of Technology, Poland); Leszek Kaczmarek (Gdansk University of Technology, Poland)

pp. 73-76

Low frequency Noise in Organic Solar Cells

Hideaki Katsu (Osaka University, Japan); Yoshitaka Kawasaki (Osaka University, Japan); Ryo Yamada (Osaka University, Japan); Hirokazu Tada (Osaka University, Japan)

pp. 77-79

Noise of Cold Emission Cathode

Alexandr Knápek (Brno University of Technology, Czech Republic); Lubomir Grmela (Brno University of Technology, Czech Republic); Josef Šikula (Brno University of Technology, Czech Republic); Vladimír Holcman (Department of Physics, Czech Republic); Armin Delong (Delong Instruments, Czech Republic)

pp. 80-83

Noise diagnostics of advanced composite materials for structural applications

Pavel Koptavy (Brno University of Technology, Czech Republic); Tomas Trcka (University of Technology, Czech Republic); Bohumil Koptavy (Brno University of Technology, Czech Republic)

pp. 84-87

Primary Thermometry by the Measurement of Shot Noise in a Tunnel Junction

Woon Song (Korea Research Institute of Standards and Science, Korea);
Jung Park (KRISS, Korea); Mushtaq Rehman (KRISS, Korea); Yonuk Chong
(KRISS, Korea)
pp. 88-89

1/f noise in ZnO films

Liu Yang (UDSMM Calais & Université du Littoral Côte d'Opale, France);
Gérard Leroy (UDSMM Calais, France); Joël Gest (UDSMM Calais, France);
Lode Vandamme (Eindhoven University of Technology, The Netherlands)
pp. 90-93

Tuesday, June 14

T3: Noise in Diodes

Noise of a Single Electron Emitter: Experiment

Francois Parmentier (Ecole Normale Supérieure, France); Erwann Bocquillon
(Ecole Normale Supérieure, France); Adrien Mahé (Ecole Normale
Supérieure, France); Jean-Marc Berroir (Ecole Normale Supérieure, France);
Christian Glattli (Ecole Normale Supérieure, France); Bernard Plaçais
(Laboratoire Pierre Aigrain & Ecole Normale Supérieure, France); Gwendal
Fève (Ecole Normale Supérieure, France); Antonella Cavanna (Laboratoire
de Photonique et Nanostructures, France); Yong Jin (Laboratoire de
Photonique et Nanostructures, France)
pp. 94-99

Low Frequency Noise as a Tool to Study Degradation Processes in 4H-SiC p-n junctions

Sergey Rumyantsev (Rensselaer Polytechnic Institute & Ioffe Institute, USA);
Michael Levinshtein (Ioffe Institute, Russia); Michael Shur (Rensselaer
Polytechnic Institute, USA); John Palmour (CREE Inc., USA); Anant Agarwal
(CREE Inc., USA); Mrinal Das (CREE Inc., USA)
pp. 100-101

Sources of 1/f noise in Si delta-doped Schottky diodes

Alexey Klyuev (Lobachevsky State University of Nizhny Novgorod, Russia);
Evgeny Shmelev (Lobachevsky State University, Russia); Arkady Yakimov
(Lobachevsky State University, Russia)
pp. 102-105

Comparison of Noise Characteristics of GaAs and GaN Schottky Diodes for Millimeter and Submillimeter Applications

Diego Pardo (Universidad Politécnica de Madrid, Spain); Susana Pérez
(University of Salamanca, Spain); Jesús Grajal (Universidad Politécnica de
Madrid, Spain); Javier Mateos (University of Salamanca, Spain); Tomás
González (University of Salamanca, Spain)
pp. 106-109

T13: Sensing, Diffusion, Thermal and Noise Processing

Fluctuation-enhanced gas sensing in practice

Janusz Smulko (Gdansk University of Technology, Poland); Mateusz Kotarski (Gdansk University of Technology, Poland); Zareh Topalian (The Angstrom Laboratory, Uppsala University, Sweden); Gunnar Niklasson (The Angstrom Laboratory, Uppsala University, Sweden); Claes Granqvist (The Angstrom Laboratory, Uppsala University, Sweden); Laszlo Kish (Texas A&M University, USA)

pp. 110-114

Anomalous Diffusion in the Dynamics of X-Ray Emission of Astrophysical Objects

Yuriy Polyakov (USPolyResearch, USA); Joseph Neilsen (Harvard University, USA); Serge Timashev (Institute of Laser and Information Technologies, Russia)

pp. 115-118

Thermal Noise driven Heat Engines: Noise put to work, while it sheds light on "quantum heat engine weirdness"

Laszlo Kish (Texas A&M University, USA)

pp. 119-122

Using a Variation of Empirical Mode Decomposition To Remove Noise From Signals

Muhammad F Kaleem (Ryerson University, Canada); Aziz Guergachi (Ryerson University, Canada); Sri Krishnan (Ryerson University, Canada)

pp. 123-126

T3: Noise in FinFETs

Low-frequency noise in triple-gate n-channel bulk FinFETs

Eddy Simoen (IMEC, Belgium); Marc Aoulaiche (Imec, Belgium); Nadine Collaert (Imec, Belgium); Cor Claeys (Imec, Belgium)

pp. 127-130

Assessment of temperature dependence of the low frequency noise in unstrained and strained FinFETs

Rachida Talmat (GREYC - ENSICAEN - Université de Caen Basse-Normandie & University of Tizi-Ouzou, France); Hakim Achour (GREYC - Université de Caen - CNRS - ENSICAEN & Mouloud Mammeri University, Tizi-Ouzou, ALGERIA, France); Bogdan Cretu (GREYC - Université de Caen - CNRS - ENSICAEN, France); Jean-Marc Routoure (GREYC/ENSICAEN Université de Caen Basse-normandie & GREYC-UMR CNRS 6072 équipe électronique, France); Arezki Benfdila (laboratoire de microélectronique et physique des semiconducteurs, Algeria); Régis Carin (GREYC - ENSICAEN - Université de Caen Basse-Normandie, France); Nadine Collaert (Imec, Belgium); Abdelkrim Mercha (Imec, Belgium); Eddy Simoen (IMEC, Belgium); Cor Claeys (Imec, Belgium)

pp. 131-134

Low-frequency Noise in FinFETs with PtSi Schottky-Barrier Source/Drain Contacts

Gunnar Malm (KTH - Royal Institute of Technology, Sweden)
pp. 135-138

T5: Mesoscopic Devices

Localization and shot noise in quantum nanostructures

Massimo Macucci (University of Pisa, Italy); Paolo Marconcini (Universita' di Pisa, Italy); Giuseppe Iannaccone (University of Pisa - Dipartimento di Ingegneria dell'Informazione, Italy)
pp. 139-143

Monitoring and Markovian Feedback Control of a Solid-state Charge qubit

Gerold Kiesslich (TU Berlin, Germany); Gernot Schaller (TU Berlin, Germany); Tobias Brandes (TU Berlin, Germany)
pg. 144

T3: Noise in Devices

Electrical and Noise Characteristics of Graphene Field-Effect Transistors

Michael Shur (Rensselaer Polytechnic Institute, USA); Sergey Rumyantsev (Rensselaer Polytechnic Institute & Ioffe Institute, USA); Guanxiang Liu (University of California, USA); Alex Balandin (University of California, USA)
pp. 145-149

Hybrid 2D-3D plasmonic noise in a gated semiconductor slab

Hugues Marinchio (University of Montpellier II, France); Christophe Palermo (University of Montpellier II, France); Luca Varani (University Montpellier & Institut D'Electronique du Sud, France); Jean-Francois Millithaler (University of Salento, Italy); Lino Reggiani (Università del Salento, Italy); Pavel Shiktorov (Semiconductor Physics Institute, Lithuania); Evgeni Starikov (Semiconductor Physics Institute, Lithuania); Viktor Gružinskis (Semiconductor Physics Institute, Lithuania)
pp. 150-153

The flicker noise in amorphous silicon based temperature sensors in flexible substrates

Moinuddin Ahmed (University of Texas at Arlington, USA); Donald P Butler (University of Texas at Arlington, USA); Zeynep Çelik-butler (University of Texas at Arlington, USA)
pp. 154-157

Frozen Noise Origin of Temporal Low-Frequency Noise in Electronic Devices

Ognian Marinov (McMaster University, Canada); M. Jamal Deen (McMaster University, Canada)
pp. 158-161

T1: Noise Theory I

Noise and Counting Statistics of a Single Electron Emitter: Theory

Mathias Albert (University of Geneva, Switzerland); Christian Flindt (University of Geneva, Switzerland); Markus Büttiker (University of Geneva, Switzerland)
pp. 162-167

On the Zero Crossings of a Generalized Shot Noise Process

Roy M Howard (Curtin University, Australia)
pp. 168-171

A Sampling Frequency and Observation Time Analysis for Efficient Stochastic Resonance in Digital Signal Processing

Yukihiro Tadokoro (Toyota Central R&d Labs., Inc., Japan); Akihisa Ichiki (Toyota Central R&D Labs., Inc., Japan); Masaki Takanashi (TOYOTA Central R&D Labs., Inc., Japan)
pp. 172-175

Defects Influenced by the Jahn-Teller Effect as the Sources of Flicker Noise in GaAs Based Devices

Evgeny Shmelev (Lobachevsky State University, Russia); Alexey Klyuev (Lobachevsky State University of Nizhniy Novgorod, Russia); Arkady Yakimov (Lobachevsky State University, Russia)
pp. 176-179

T3: Noise in HEMTs

Suppression of high-frequency electronic noise induced by 2D plasma waves in field-effect and high-electron-mobility transistors

Hugues Marinchio (University of Montpellier II, France); Christophe Palermo (University of Montpellier II, France); Luca Varani (University Montpellier & Institut D'Electronique du Sud, France); Pavel Shiktorov (Semiconductor Physics Institute, Lithuania); Evgeni Starikov (Semiconductor Physics Institute, Lithuania); Viktor Gružinskis (Semiconductor Physics Institute, Lithuania)
pp. 180-183

Monte Carlo study of the noise performance of isolated-gate InAs HEMTs

Helena Rodilla (University of Salamanca, Spain); Beatriz Vasallo (Universidad de Salamanca, Spain); Javier Mateos (University of Salamanca, Spain); Giuseppe Moschetti (Chalmers University of Technology, Sweden); Jan Grahn (Chalmers University of Technology, Sweden); Tomás González (University of Salamanca, Spain)
pp. 184-187

T1: Noise Theory II

First return time probability in correlated stationary signals

Luigi Palatella (University of Salento, Italy); Cecilia Pennetta (University of Salento, Italy)

pp. 188-191

Solutions of nonlinear stochastic differential equations with 1/f noise power spectrum

Bronislovas Kaulakys (Vilnius University, Lithuania); Julius Ruseckas (Vilnius University, Lithuania)

pp. 192-195

Theory of fluctuations in non-equilibrium electron-hot-phonon system

Arvydas Matulionis (Semiconductor Physics Institute, Center Phys. Sci. & Technology, Lithuania); Mindaugas Ramonas (Semiconductor Physics Institute, Center Phys. Sci. & Technology, Lithuania); Ramunas Katilius (Semiconductor Physics Institute, Center Phys. Sci. & Technology, Lithuania); Serge Gantsevich (Ioffe Physico-Technical Institute, Russia)

pp. 196-199

Stochastic Resonance with Group Chase and Escape

Atsushi Kamimura (The University of Tokyo, Japan); Shigenori Matsumoto (The University of Tokyo, Japan); Tomoaki Nogawa (The University of Tokyo, Japan); Nobuyasu Ito (The University of Tokyo, Japan); Toru Ohira (Sony Computer Science Laboratories, Inc., Japan)

pp. 200-203

T3: RTS Noise

Advanced Modeling of Oxide Defects for Random Telegraph Noise

Wolfgang Goes (Vienna University of Technology, Austria); Franz Schanovsky (Vienna University of Technology, Austria); Tibor Grassler (Vienna University of Technology, Austria); Hans Reisinger (Infineon Technologies AG, Munich, Germany); Ben Kaczer (IMEC, Belgium)

pp. 204-207

Random Telegraph Signal Noise in CMOS Active Pixel Sensors

M. Jamal Deen (McMaster University, Canada); Ognian Marinov (McMaster University, Canada)

pp. 208-211

P2: Posters for T3, T5, T6, T7 & T13

Noise Characteristics of Dual-gate AlGaAs/InGaAs pHEMTs

Chih-Chan Hu (National Central University, Taiwan); Dong-Ming Lin (Taiwan Semiconductor Manufacturing Company, Taiwan); Chien-Chang Huang (Yuan

Ze University, Taiwan); Yue-ming Hsin (National Central University, Taiwan); Cheng-Kuo Lin (Win Semiconductors Corporation, Taiwan); Yu-Chi Wang (Win Semiconductors Corporation, Taiwan); Yi-Jen Chan (Industrial Technology Research Institute, Taiwan)
pp. 212-215

High-Frequency Voltage Noise of Nanometric Schottky-Barrier Diodes and Heterostructure Barrier Varactorin Cyclostationary Conditions

Luca Varani (University Montpellier & Institut D'Electronique du Sud, France)
pp. 216-219

Non-Fundamental Low Frequency Noise Theory: Drain Noise-Current Modeling of AlGaIn/GaN HFETs

Farzin Manouchehri (Concordia University, Canada); Pouya Valizadeh (Concordia University, Canada); Zahangir Kabir (Concordia University, Canada)
pp. 220-222

Suppression of thermal fluctuations of nanomechanical resonator (ground state cooling) by thermally activated electronic flow.

Leonid Gorelik (Chalmers University of Technology, Sweden)
pp. 223-226

Low Frequency Noise of CdTe Single Crystals under Light Illumination

Alexey Andreev (Brno University of Technology, Czech Republic); Lubomir Grmela (Brno University of Technology, Czech Republic); Ondrej Sik (Brno University of Technology, Czech Republic); Hassan Elhadidy (Brno University of Technology, Czech Republic); Josef Šikula (Brno University of Technology, Czech Republic)
pp. 227-229

Influence of the underlap length on the RF noise performance of a Schottky Barrier MOSFET

Elena Pascual (University of Salamanca, Spain); Raúl Rengel (University of Salamanca, Spain); María Jesús Martín (University of Salamanca, Spain)
pp. 230-233

Low-frequency noise in graphene field-effect transistors

Sergey Romyantsev (Rensselaer Polytechnic Institute & Ioffe Institute, USA); Guanxiong Liu (University of California, USA); William Stillman (Rensselaer Polytechnic Institute, USA); Valentine Kachorovskii (Ioffe Institute, Rensselaer Polytechnic Institute, Russia); Michael Shur (Rensselaer Polytechnic Institute, USA); Alex Balandin (University of California, USA)
pp. 234-237

Noise Characterisation of Transport Properties in Single Wall Carbon Nanotube Field-Effect Transistors

Viktor Sydoruk (Forschungszentrum Juelich, Germany); Mykhaylo Petrychuk (Taras Shevchenko National University of Kyiv, Ukraine); Ant Ural (University of Florida, USA); Gijs Bosman (University of Florida, USA); Andreas Offenhäusser (Forschungszentrum Jülich, Germany); Svetlana Vitusevich (Forschungszentrum Juelich, Germany)
pp. 238-241

Noise Spectroscopy of Traps in Silicon Nanowire Field-Effect Transistors

Sergii Pud (Forschungszentrum Juelich, Germany); Jing Li (Forschungszentrum Juelich, Germany); Mykhaylo Petrychuk (Taras Shevchenko National University of Kyiv, Ukraine); Sebastian Feste (Forschungszentrum Juelich, Germany); Andreas Offenhäusser (Forschungszentrum Jülich, Germany); Siegfried Mantl (Forschungszentrum Juelich, Germany); Svetlana Vitusevich (Forschungszentrum Juelich, Germany)

pp. 242-245

Bohmanian formulation of Full Counting Statistics in mesoscopic systems

Guillem Albareda (Universitat Autònoma de Barcelona, Spain); Fabio Traversa (Universitat Autònoma de Barcelona, Spain); Xavier Oriols (Universitat Autònoma de Barcelona, Spain)

pp. 246-249

Discussion on the possibility of diffusive transport in mesoscopic conductors

Paolo Marconcini (Universita' di Pisa, Italy); Massimo Totaro (University of Pisa, Italy); Massimo Macucci (University of Pisa, Italy)

pp. 250-253

Channel Noise and Correlation Noise of Video Sequences in Distributed Video Coding

Kuganeswaran Thambu (Dept of Electrical and Computer Engineering, Canada); Xavier N Fernando (Ryerson University, Canada)

pp. 254-257

Response of electrohydrodynamic convection to external noise

Jong-Hoon Huh (Kyushu Institute of Technology, Japan)

pp. 258-261

Deterministic Fluctuation-Response Relation

Akihisa Ichiki (Toyota Central R&D Labs., Inc., Japan); Yukihiro Tadokoro (Toyota Central R&d Labs., Inc., Japan); Masaki Takanashi (TOYOTA Central R&D Labs., Inc., Japan)

pp. 262-265

Comparison of effectiveness of gas sensing by low frequency fluctuations in resistance and microbalance quartz gas sensors

Lech Hasse (Gdansk University of Technology & Faculty of Electronics, Telecommunications and Informatics, Poland); Mateusz Kotarski (Gdansk University of Technology, Poland); Janusz Smulko (Gdansk University of Technology, Poland); Jiri Majzner (Brno University of Technology, Czech Republic); Vlasta Sedlakova (Brno University of Technology, Czech Republic); Petr Sedlak (Brno University of Technology, Czech Republic); Josef Šikula (Brno University of Technology, Czech Republic)

pp. 266-269

T3: Noise in Transistors

Experimental Test of Fluctuation Theorem in a Quantum Coherent Conductor

Kensuke Kobayashi (Kyoto University, Japan)
pp. 270-274

Accurately Measured Two-Port Low Frequency Noise and Correlation of GaAs Based HBTs

Oya Sevimli (Macquarie University, Australia); Anthony Parker (Macquarie University, Australia); Anthony Fattorini (M/A-COM Technology Solutions, Australia); James Harvey (M/A-COM Technology Solutions, Australia)
pp. 275-278

Improvement of 1/f noise in advanced 0.13 μm BiCMOS SiGeC Heterojunction Bipolar Transistors

Fabien Pascal (University of Montpellier & Institut d'Electronique du Sud, France)
pp. 279-282

Study of 1/f and generation-recombination noise in four gate transistors

Abraham Luque Rodríguez (University of Granada, Spain); Juan Jiménez Tejada (Universidad de Granada, Spain); María Marín González (Universidad de Granada, Spain); María Reverte Planes (Universidad de Granada, Spain); Pilar López Varo (Universidad de Granada, Spain); Andrés Godoy (Universidad de Granada, Spain)
pp. 283-286

Flicker Noise due to Variable Range Hopping in Organic Thin-Film Transistors

Ognian Marinov (McMaster University, Canada); M. Jamal Deen (McMaster University, Canada)
pp. 287-290

T4: Optical Devices

Low-frequency Noise in GaN Diodes

Charles Surya (The Hong Kong Polytechnic University, P.R. China)
pp. 291-296

Terahertz responsivity enhancement and low-frequency noise study in silicon CMOS detectors using a drain current bias

Alvydas Lisauskas (Physikalisches Institut, Johann Wolfgang Goethe-Universität Frankfurt, Germany); S. Boppel (Physikalisches Institut, Johann Wolfgang Goethe-Universität Frankfurt, Germany); H. G. Roskos (Physikalisches Institut, Johann Wolfgang Goethe-Universität Frankfurt, Germany); Jonas Matukas (Vilnius University, Lithuania); Vilius Palenskis (Vilnius University, Lithuania); Linas Minkevičius (Center for Physical Sciences and Technology, Lithuania); Gintaras Valušis (Center for Physical

Sciences and Technology, Lithuania); Peter Haring Bolívar (The Institute of High Frequency and Quantum Electronics, University of Siegen, Germany)
pp. 297-300

Noise characteristics and radiation spectra of multimode MQW laser diodes during mode-hopping effect

Sandra Pralgauskaitė (Vilnius University, Lithuania); Vilius Palenskis (Vilnius University, Lithuania); Bronius Saulys (Vilnius University, Lithuania); Jonas Matukas (Vilnius University, Lithuania); Vladimir Kornijcuk (Vilnius University, Lithuania); Saulius Smetona (RFMD, USA)
pp. 301-304

Ultrasensitive Portable Optoelectronic System dedicated to detection of Bioluminescence

Jean Kayaian (Société Contralco, France); Bernard Orsal (University of Montpellier (UM 2), France)
pp. 305-308

Noise Equivalent Pressure of a 1550 nm fiber laser as an underwater acoustic sensor dedicated to high depth

Bernard Orsal (University of Montpellier (UM 2), France); Shiraz Ouarets (University of Montpellier (UM 2), France); René Vacher (University of Montpellier (UM 2), France); David Dureisseix (Université Montpellier 2, France)
pp. 309-312

Optoelectronic 1/f noise of Avalanche Photodiodes (AlInAs/GalnAs/InP) dedicated to Photonic Instrumentation and Telecommunication

Shiraz Ouarets (University of Montpellier (UM 2), France); Bernard Orsal (University of Montpellier (UM 2), France); Majda Lahrichi (Alcatel-Thales III-V Lab, France); Mohand Achouche (Alcatel-Thales III-V Lab, France)
pp. 313-316

T3: Noise in MOSFETs I

Trap density in Ge-on-Si pMOSFETs with Si intermediate layers

Kristel Fobelets (Imperial College London, United Kingdom); Sergey Romyantsev (Rensselaer Polytechnic Institute & Ioffe Institute, USA); Benjamin Vincent (IMEC, Belgium); Jerome Mitard (IMEC, Belgium); Brice De Jaeger (IMEC, Belgium); Eddy Simoen (IMEC, Belgium); Thomas Hoffmann (IMEC, Belgium); Michael Shur (Rensselaer Polytechnic Institute, USA)
pp. 317-320

Comparison of Dynamic Fluctuation in Drain Current with Static Variability Using N-MOSFETs with Poly-Si/SiO₂ Gate Stack Structures

Kenji Ohmori (University of Tsukuba, Japan); Ranga Hettiarachchi (University of Tsukuba, Japan); Wei Feng (Waseda University, Japan); Takeo Matsuki (Waseda University, Japan); Keisaku Yamada (University of Tsukuba, Japan)
pp. 321-324

T6: Circuit & Systems

Analytical assessment of orbital noise effects in ring oscillators

Fabio Traversa (Universitat Autònoma de Barcelona, Spain); Fabrizio Bonani (Politecnico di Torino, Italy)

pp. 325-328

T11: Measurement Techniques I

Measurements of the Third Cumulant in Quantum Shot Noise at High Frequency

Julien Gabelli (CNRS, Université Paris Sud, France); Bertrand Reulet (Université de Sherbrooke, Canada)

pp. 329-331

SiGe HBT-Based Active Cold LOAD: Design, Characterization and Stability Measurements

Emilie Leynia de la Jarrige (LAAS-CNRS, France); Laurent Escotte (LAAS-CNRS, France); Eric Gonneau (LERISM, University Paul Sabatier, France); Jean-Marc Goutoule (EADS-Astrium, France)

pp. 332-335

Noise in Quartz Crystal Microbalance

Petr Sedlak (Brno University of Technology, Czech Republic); Josef Šikula (Brno University of Technology, Czech Republic); Jiri Majzner (Brno University of Technology, Czech Republic); Martin Vrnata (Institute of Chemical Technology in Prague, Czech Republic); Filip Vyslouzil (Institute of Chemical Technology in Prague, Czech Republic); Premysl Fitl (Institute of Chemical Technology in Prague, Czech Republic); Dusan Kopecky (Institute of Chemical Technology in Prague, Czech Republic); Peter Handel (University of Missouri at St. Louis, USA)

pp. 336-339

Quantum paradoxes in electronic counting statistics

Adam Bednorz (University of Warsaw, Poland); Kurt Franke (University of Konstanz, Germany); Wolfgang Belzig (University of Konstanz, Germany)

pp. 340-343

T3: Noise in MOSFETs II

1/f noise in strained SiGe On Insulator MOSFETs

Matteo Valenza (University Montpellier, France)

pp. 344-347

Low Frequency Noise modeling of SOI MOSFETs using Green's Function Approach

Joanna El husseini (University of Montpellier 2, France); Frédéric Martinez (Montpellier University & IES, France); Jimmy Armand (Montpellier University, France); Maryline Bawedin (Montpellier University, France); Matteo Valenza (University Montpellier, France); Fabien Pascal (University of Montpellier & Institut d'Electronique du Sud, France)

pp. 348-351

Low-frequency Noise and Stress-Induced Degradation in LDMOS

Iqbal Mahmud (University of Texas Arlington, USA); Zeynep Çelik-butler (University of Texas at Arlington, USA); Pinghai Hao (Texas Instruments Inc., USA); Frank Hou (Texas Instruments Inc, USA); Benjamin Amey (Texas Instruments Inc., USA); Tahir Khan (Freescale Semiconductor Inc., USA); Weixiao Huang (Freescale Semiconductor Inc., USA)

pp. 352-355

Channel Thermal Noise and its Scaling Impact on Deep Sub-100nm MOSFETs

Ge Tan (McMaster University, Canada); Chih-Hung James Chen (McMaster University, Canada); Bigchoug Hung (United Microelectronics Corporation, Taiwan); Peiming Lei (United Microelectronics Corporation Group, USA); C. S. Yeh (UMC, Taiwan)

pp. 356-359

T3: Noise in Nano Devices

Noise in Graphene and Carbon Nanotube Devices

Giuseppe Iannaccone (University of Pisa - Dipartimento di Ingegneria dell'Informazione, Italy)

pp. 360-363

Gate Voltage Control of Stochastic Resonance in Carbon Nanotube Field Effect Transistors

Toshio Kawahara (Chubu University, Japan); Satarou Yamaguchi (Chubu University, Japan); Maehashi (Osaka University, Japan); Yasuhide Ohno (Osaka University, Japan); Kazuhiko Matsumoto (Osaka University, Japan); Shin Mizutani (NTT Communication Science Laboratories, Japan)

pp. 364-367

RTS and 1/f noise in Ge nanowire transistors

Dionyz Pogany (Vienna University of Technology, Austria); Clemens Zeiner (Vienna University of Technology, Austria); Sergey Bychikhin (Vienna University of Technology, Austria); Thomas Burchhart (Vienna University of Technology, Austria); Alois Lugstein (Vienna University of Technology, Austria); Lode Vandamme (Eindhoven University of Technology, The Netherlands)

pp. 368-371

High Frequency Noise in Manufacturable Carbon Nanotube Transistors

Paulius Sakalas (Technische Universität Dresden & Semiconductor Physics Institute of State Research Center, Lithuania, Germany); Michael Schroter (RF Nano Corp., USA)
pp. 372-375

T11: Measurement Techniques II

Inelastic scattering effects and electronic shot noise

Manohar Kumar (University of Leiden & LION, The Netherlands); Roel Smit (Leiden University, The Netherlands); Jan M van Ruitenbeek (Leiden University, The Netherlands)
pp. 376-380

Impedance meter based on cross-correlation noise measurements

Graziella Scandurra (University of Messina, Italy); Carmine Ciofi (University of Messina, Italy)
pp. 381-384

Compact USB measurement and analysis system for real-time fluctuation enhanced sensing

Robert Mingesz (University of Szeged, Hungary); Zoltan Gingl (University of Szeged, Hungary)
pp. 385-388

Supercapacitors in bias systems for low frequency noise measurements

Graziella Scandurra (University of Messina, Italy); Carmine Ciofi (University of Messina, Italy)
pp. 389-392

P3: Posters for T4, T8, T11 & T12

Low-Frequency Noise in a-Se Based X-ray Photoconductors

Thomas Meyer (University of Saskatchewan, Canada); Robert E Johanson (University of Saskatchewan, Canada); George Belev (Canadian Light Source, Canada); Safa Kasap (University of Saskatchewan, Canada)
pp. 393-396

Spatial Knowledge Based Complicated Area Classification from Remote Sensing Image

Cheng Qiao (Institute of Remote Sensing Applications, CAS, P.R. China)
pp. 397-400

Correlation of Acoustic Emission, Light Fluctuations Surface and Three-Dimensional Distribution EL Intensity in InGaN/GaN structures

Maxim Kisseluk (Institute of Semiconductor Physics of NASU, Ukraine); Olexander Vlasenko (Institute of Semiconductor Physics of NASU, Ukraine); Oleg V. Lyashenko (Kyiv National University of Taras Shevchenko, Ukraine)

pp. 401-404

Noise and optical activities of local defects in solar cells pn junctions

Pavel Koktavy (Brno University of Technology, Czech Republic); Robert Macku (Brno University of Technology, Czech Republic)

pp. 405-408

Measurement of Optical impairments in OFDM based Radio-Over-Fiber Communication Systems

Muhammad I Khan (Ryerson University, Canada); Kaamran Raahemifar (Ryerson University, Canada)

pp. 409-412

Cerebral cortical alpha rhythms and a discussion on its nonlinear analysis results

Noboru Tanizuka (Osaka Prefecture University, Japan); Teruhisa Hochin (Kyoto Institute of Technology, Japan)

pp. 413-416

Charge transport and current fluctuations in bacteriorhodopsin

Jean-Francois Millithaler (University of Salento, Italy); Eleonora Alfinito (Universita' del Salento, Italy); Lino Reggiani (Università del Salento, Italy)

pp. 417-420

Properties of neural noise in amblyopia

José M. Medina (University of Minho & Center for Physics, Portugal); Jorge Carvalho (University of Minho, Portugal); Sandra Franco (University of Minho, Portugal)

pp. 421-424

Noise bias correction in accumulated modulus NMR signal recovery

Giuseppe Martini (University of Pavia, Italy); Gianni Ferrante (STELAR S.r.l., Italy)

pp. 425-428

Cross-correlation analysis to salt-bridge dynamics in force-induced unfolding of titin kinase

Ming-Chya Wu (National Central University, Taiwan); Jeffrey G. Forbes (National Institutes of Health, USA); Kuan Wang (Academia Sinica, Taiwan)

pp. 429-432

Uncertainties in the estimation of low frequency noise level extracted from noise spectral density measurements

Bruno Guillet (GREYC - Université de Caen - CNRS - ENSICAEN, France); Sheng Wu (GREYC - Université de Caen - CNRS - ENSICAEN, France); Bogdan Cretu (GREYC - Université de Caen - CNRS - ENSICAEN, France); Rachida Talmat (GREYC - ENSICAEN - Université de Caen Basse-Normandie & University of Tizi-Ouzou, France); Hakim Achour (GREYC - Université de Caen - CNRS - ENSICAEN & Mouloud Mammeri University, Tizi-Ouzou, ALGERIA, France); Carlo Barone (CNR-SPIN Salerno - Università degli Studi di Salerno, Italy); Sergio Pagano (CNR-SPIN Salerno - Università di Salerno, Italy); Eric Sassier (GREYC - Université de Caen - CNRS - ENSICAEN, France); Jean-Marc Routoure (GREYC/ENSICAEN Université de Caen Basse-normandie & GREYC-UMR CNRS 6072 équipe électronique, France)

pp. 433-436

Poole Frenkel Currents and 1/f Noise Characteristics of High Voltage MLCCs

Munecazu Tacano (Meisei University, Japan); Hiroshi Ohya (Meisei University, Japan); Nobuhisa Tanuma (Meisei University, Japan); Josef Šikula (Brno University of Technology, Czech Republic)

pp. 437-439

Observation of random telegraph signal in reverse polarized Silicon Carbide Schottky diodes

Arkadiusz Szewczyk (Gdansk University of Technology, Poland); Jacek Cichosz (Politechnika Gdanska, Poland)

pp. 440-443

The Low Frequency Noise Behaviour of SiC MESFETs

Alicja Konczakowska (Gdansk University of Technology, Poland); Jacek Cichosz (Politechnika Gdanska, Poland)

pp. 444-447

Characterization of degradation process in white light nitride-based LEDs by low-frequency noise

Bronius Saulys (Vilnius University, Lithuania); Vilius Palenskis (Vilnius University, Lithuania); Jonas Matukas (Vilnius University, Lithuania); Sandra Pralgauskaitė (Vilnius University, Lithuania); Egle Tylaite (University of Cambridge, United Kingdom)

pp. 448-451

Thursday, June 16

T12: Reliability

Diagnostic Tools for Accurate Reliability Investigations of GaN Devices

Jean-Guy Tartarin (University of Toulouse & LAAS-CNRS, France)

pp. 452-457

Link between low frequency noise and reliability of compound semiconductor HEMTs and HBTs

Nathalie Labat (IMS Laboratory, Université Bordeaux 1, France); Nathalie Malbert (Université Bordeaux1, France); Cristell Maneux (Université Bordeaux 1, France); Arnaud Curutchet (Université Bordeaux 1 & IMS laboratory, France); Brice Grandchamp (Université Bordeaux 1, France)

pp. 458-463

Device reliability study of GaN HEMTs using both low frequency noise and microwave noise temperature spectroscopy

Hemant Rao (University of Florida, USA); Gijs Bosman (University of Florida, USA)

pp. 464-467

T2: Noise in Materials

Noise probe explores the glassiness of Ferromagnetic Insulating (FMI) state in manganites

Sudeshna Samanta (S N Bose National Centre for Basic Sciences, India);
Arup Raychaudhuri (S N Bose National Centre for Basic Sciences, India)
pp. 468-471

Comparison of the Effects of Different Surfactants on Electrical Parameters in Carbon Nanotube Thin Films

Gilbert Sassine (University of Montpellier II & IES, France)
pp. 472-475

Low Frequency Noise in Phase Change Materials

Rakesh Gnana David Jeyasingh (Stanford University, USA); Jan A. Chroboczek (ENSER-Grenoble & MINATEC, France); Gerard Ghibaudo (IMEP-LAHC & Minatec-INPG, France); Mireille Mouis (IMEP-LAHC, INP-Grenoble, MINATEC, France); H.-S. Philip Wong (Stanford University, USA)
pp. 476-479

Low-Frequency 1/f Noise in Bismuth Selenide Topological Insulators

Md. Zahid Hossain (University of California, Riverside, USA); Khan M Farhan Shahil (University of California, Riverside, USA); Desalegne Teweldebrhan (University of California, Riverside, USA); Alex Balandin (University of California, USA); Sergey Romyantsev (Rensselaer Polytechnic Institute & Ioffe Institute, USA); Michael Shur (Rensselaer Polytechnic Institute, USA)
pp. 480-482

Evidence of charge carrier number fluctuations in InN thin films

Jean-Marc Routoure (GREYC/ENSICAEN Université de Caen Basse-normandie & GREYC-UMR CNRS 6072 équipe électronique, France)
pp. 483-485

Noise of Ta₂O₅ thin insulating films in the temperature range 10 K to 400 K

Vlasta Sedlakova (Brno University of Technology, Czech Republic); Milos Chvatal (Brno University of Technology, Czech Republic); Martin Kopecky (Brno University of Technology, Czech Republic); Josef Šikula (Brno University of Technology, Czech Republic)
pp. 486-489

T8: Biophysical System

Bayesian information decoding by a cell

Tetsuya Kobayashi (University of Tokyo, Japan)
pp. 490-492

Ghost stochastic resonance in the model of neural auditory system

Yuriy Ushakov (Lobachevsky State University of Nizhni Novgorod, Russia); Evgeniy Karandasov (Lobachevsky State University of Nizhni Novgorod, Russia); Alexander Dubkov (Lobachevsky State University, Russia)
pp. 493-494

Gene expression noise in embryonic spatial patterning: reliable formation of the head-to-tail axis in the fruit fly

David Holloway (British Columbia Institute of Technology, Canada); Alexander Spirov (Stony Brook University, USA)
pp. 495-498

T9: Financial Systems II

Modeling the inverse cubic distributions by nonlinear stochastic differential equations

Bronislovas Kaulakys (Vilnius University, Lithuania); Miglius Alaburda (Vilnius University, Lithuania)
pp. 499-502

T9: Financial Systems I

The Limit Distributions of Growth Rate Fluctuation of Complex Systems: An Application to Business Firms

Hideki Takayasu (Sony Computer Science Laboratories, Japan)
pp. 503-504